

ABSTRACT OF THE DISCLOSURE

A UV curing apparatus and method is provided for enhancing UV curing of inks, coatings and adhesives having UV photo initiators therein by subjecting the UV curable inks, coatings or adhesives to UV light at different wavelengths. Preferably, the UV LED assemblies are alternated in rows and emit light at a wavelength between 180 nm and 420 nm. A row of UV-LED assemblies which emit light in the visible spectrum can be included so a user can visually see if the apparatus is working. A cooling system can be provided for maintaining the UV-LED assemblies at a desired temperature to maintain light intensity and the UV-LED assemblies are placed at a distance from the UV curable product which will provide a uniform pattern of light diverging from the UV-LED chips of at least 50% the power output of the UV-LED chips at a viewing cone angle of $2\theta_{1/2}$. Still further the apparatus can be combined with an ink, coating or adhesive having photo initiators that are activated by light at more than one wavelength.